

## **APPLICATION OF CELLULAR SPRAYED CONCRETE INTO TWO-LIFT CONCRETE PAVEMENT**

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Two-lift concrete paving involves placing two layers of concrete 'wet-on-wet' instead of the traditional method of using a single homogeneous layer of concrete. The thick bottom layer offers the opportunity to optimize the use of local aggregates, recycled materials to produce an economical, durable, and sustainable pavement system with the most desirable surface characteristics like improved skid resistance and reduced noise provided by the high-quality surface of the high-performance concrete. The time between placing layers is often no more than 30 minutes. Perhaps the challenge involved in the construction of two-layer concrete systems includes the additional costs and logistics required for two plants to produce different concrete mixtures and two slip-form paver for paving both of bottom and top layers.

A very simple and economic method for remixing an ordinary Portland cement concrete (OPC) into a high performance concrete (HPC) at a job site was developed, which is called 'Cellular sprayed concrete'. Cellular sprayed concrete is produced by incorporating a preformed foam and fine powders in a ready mixed concrete and is conveyed under pressure through a pneumatic hose or pipe and projected into place at high velocity, with simultaneous compaction. This method can solve the problem of two batch plants and two pavers in 2LCP construction. 'Cellular sprayed concrete' enable utilizing a single batch plant for constructing 2-lift concrete pavement instead of 2 batch plants. This paper describes an extra ordinary application of sprayed concrete into concrete pavement.